

VIRGINIA WILDLIFE

AUGUST 2011

FOUR DOLLARS



Eastern Shore Fare • Kings of the Bay • Resilient Pelicans

AUGUS



2011 CONTENTS



©Tom Badger

5 Eastern Shore Fare by Curtis Badger

The local foods movement is nothing new to those who hunt and fish.

10 Haunted by Jim Mize

For one fisherman, torture comes in the form of those that got away.



©Ken Perrotte

12 Unraveling the Mystery by Cristina Santiestevan

Concern over the disappearing woodrat has biologists looking for clues.

16 Kings of the Bay by Ken Perrotte

When cobia are running, few other fish can match the excitement.



©Gregory J. Pels

21 A Call For Shark Conservation by William H. Funk

Essential to healthy oceans, sharks are disappearing at an alarming rate.

26 The Resilient Brown Pelican by Emily M. Grey

This icon of the coast has staged a comeback, thanks to protective actions.

29 AFIELD AND AFLOAT

31 Smallmouth Journal • 32 Photo Tips • 33 On the Water • 34 Dining In

ABOUT THE COVER: Brown pelican. Story on page 26. © Ken Conger



BOB DUNCAN
Executive Director



As we approach Labor Day and summer's end, we should not lose sight of the need to be ever mindful of safety while boating. With more than eight million Virginians sharing our land and waterways, we can expect to experience more boat traffic and, with the speed capability of today's boats and personal watercraft, it will be increasingly more important to take all safety precautions possible and heed established boating laws and regulations.

Here in the Old Dominion, we average about 120 boating accidents per year, with loss of life in 20 of those cases. Recent high-profile boating accidents have made us all more keenly aware of the potential dangers associated with boating when not conducted properly. Informed boaters strive to reduce their risk when operating a boat by avoiding alcohol, by not operating too fast at night, by having a proper lookout, and by always wearing a life jacket.

Just like seat belts, life jackets cannot help you if you don't wear them! With the introduction of sleeker and inflatable life jackets, there is really no good excuse for not wearing one. Just wear it; you'll be glad you did!

Boating education, now mandatory, is making a big difference. A person who has taken a National Association of State Boating Law Administrators (NASBLA)-approved course is 70 percent less likely to be involved in a boating accident. These safety courses have also resulted in a decline in the number of accidents associated with the operation of personal watercraft, and thankfully, no fatalities occurred on such watercraft last year.

With the storied Chesapeake Bay and the many wonderful rivers, streams, and lakes across our great commonwealth, recreational boaters have many wonderful boating destinations to choose from. Part of our mission here at the Department is to promote the safety of persons and property in connection with boating and we want every boater to be responsible, to be safe, and to have fun! If you would like more information on safe boating or boating opportunities in Virginia, please visit our website at: www.dgif.virginia.gov/boating.

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To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth; To provide opportunity for all to enjoy wildlife, inland fish, boating and related outdoor recreation and to work diligently to safeguard the rights of the people to hunt, fish and harvest game as provided for in the Constitution of Virginia; To promote safety for persons and property in connection with boating, hunting and fishing; To provide educational outreach programs and materials that foster an awareness of and appreciation for Virginia's fish and wildlife resources, their habitats, and hunting, fishing, and boating opportunities.

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EASTERN SHORE FARE

Local Foods
Are a Way of Life





*Those who live and
recreate in rural areas
can teach us a thing or
two about local.*

by Curtis Badger

Growing up on Virginia's Eastern Shore, I got to know and love foods that many people elsewhere in the state have never heard of. A platter of toads, anyone? How about a fried spot? A clam fritter sandwich?

The local foods movement has become very popular in recent years, but for those of

us who live in rural areas and fish and hunt on a regular basis, eating local foods is nothing new. In fact, what we eat and how we prepare it reflect our history and our culture. On the Eastern Shore, harvesting seafood has been a way of life for centuries. Traditionally, the commercially valuable fish—flounder, striped bass, sea trout, bluefish, channel bass—went to market with an invoice attached. The by-catch, the fish that swam under the marketing radar, were brought home for dinner. These might include swelling toads (aka blowfish), spot, croakers, black wills, pigfish, and sand mullet. Over the generations, these have become prized local foods. While flounder are very popular in seafood restaurants, I'd take a platter of fried spot over flounder any day of the week.

For the early colonists, salting fish was a matter of survival, a means of preserving a bit of protein to get them through the winter months. Salting fish long ago ceased being a means of survival, but many coastal families still have an old stone crock, and in late fall they'll catch spot, croakers, or small sea trout, fillet them, and pack them in salt to have for breakfast on a cold winter morning.

In our family, the traditional Christmas breakfast consists of salted fish, scrambled eggs, bacon, and biscuits. We go out in late October, while the bays and creeks still have a few spot, croakers, and trout. I prepare the fish by scaling and filleting them and rinsing them in fresh water. Then I pack them in salt in the old crock. A layer of salt, a layer of fish. And so on until I run out of filets. I cover the

crock with a tea towel, place a dinner plate on top to hold it in place, and let the fish and the salt begin their chemical reaction, a marriage of earth and sea, holding in suspension the last of the summer as we await a new spring.

For salting, fish must proceed quickly from the bay to the crock. Time is of the essence. Fish that have languished for a day or two in a seafood market refrigerator are useless. The process depends upon the salt reacting with the moisture in the tissues of the fish to make a brine, and once taken from the sea, fish dehydrate quickly. When salted when they are very fresh, the meat will remain firm and white throughout the winter.

Eating salted fish is an occasional indulgence, not a common practice, especially for those of us who keep a watch on our blood pressure. We think of salted fish as an accompaniment rather than a main dish. We soak them in water overnight to remove most of the salt, and then we boil them for about ten minutes until they are done. Sometimes, we'll flake the cooked fish, add it to mashed potatoes, and make a tasty potato cake—sort of an Eastern Shore version of a latke.

Those of us who go fishing with the intention of bringing the catch home for dinner tend to be unsophisticated fishermen. That's because fishing methods that lack sophistication tend to be the most effective. If it's fish you want to eat, why try to attract them with something made of fur, feather, metal, or plastic? If you want to catch fish, give them what they really want, which usually is another fish of a more modest dimension.

I once had a fleeting urge to be a sophisticated fisherman so I bought a saltwater fly rod. I had fun whipping the rod around and making the line do all sorts of things, but I rarely caught fish. And so I snipped off the fly, tied on a hook, baited it with a piece of squid, and began having a fine old time with the croakers.

A friend who lived in the suburbs of D.C., who was a for-real sophisticated fisherman, one day asked me how I was doing with the fly rod. "Great," I said, "catching all kinds of croakers."

"What are you catching them on?"

"Squid," I answered.

"How do you tie it?"

"What do you mean tie it? I cut off a slice and put it on the hook."



© Tom Badger

A "mess of fish" implies a wide variety of species and might include croakers, spot, sand mullet, swelling toads, and others. Eating local foods is nothing new to those of us who hunt and fish.

He gave me his best Felix Unger look, and the next time he visited he brought me a box of six beautiful imitation squid strips made from the downy feathers of a snow goose tummy. They look great on the wall.

What I do is called bottom fishing, and I suspect that phrase carries implications that go beyond the fact that I locate my bait at or near the bottom of the particular creek I'm fishing. Bottom fisherman.

Those of us who go fishing with the intention of bringing the catch home for dinner tend to be unsophisticated fishermen.



© Curtis Badger

The spot rarely weighs more than a pound, but it is a favorite among inshore anglers and is highly regarded among seafood lovers.



©Tom Badger

Bottom feeder. It doesn't look good on one's resume.

But it does look good on one's platter, and that's the entire point, isn't it? We're talking about real food here, not sophistication, not athleticism, not guile and cunning and the ability to pluck the tummy of a snow goose, and turn that goose down into a deadly weapon that if, presented with just the proper touch, the proper drift, will entice a croaker to inhale it, thus impaling itself, and after a brief but exciting skirmish end up amid cool eelgrass in the bottom of one's custom-made hand woven creel from Farlow's of London.

Lordy. All I wanted was some fish for dinner.

I like to bottom fish because I like to eat fish. When you get that little rattle and tug on your line, you never know what's going to end

Of Fritters, Toads, and Spot

Many people who live along the coast have a penchant for fish and seafood unknown in other places. Spot (*Leiostomus xanthurus*), for example, may not be well known among the broader market, but they are very popular along the Chesapeake Bay and its tributaries in late summer when the corn and butterbeans are ripening, the tomatoes are heavy on the vine, and that glass of sweet tea glistens in the afternoon sun.

Another small panfish called the pigfish (*Orthopristis chrysoptera*) is a beautiful little fish with subtle coloring around the gill covers ranging from orange to blue. It snorts a bit when it comes out of the water; hence, the name. Few people beyond the Chesapeake know of pigfish, but a wonderful summer meal consists of a platter of lightly fried pigfish, cornbread, fresh butterbeans, and baked tomatoes. Pigfish have firm white flesh and a modestly fishy flavor, not quite as oily as spot or bluefish, not as bland as flounder.

Purists will tell you that spot and pigfish should always be fried with the head and tail left on to prevent that flavorful oil from escaping during cooking. Purists of a certain age will tell you the head and tail should be left on, and the fish

should be fried in bacon grease. A bite of crisply fried spot tail is unlike anything you'll ever find on a store shelf.

Another wonderful fish that sees limited market share is the swelling toad (*Spherooides maculatus*), also known as a puffer or blowfish. These fish delight kids because when removed from the water they inflate an air bladder and become about four times normal size. Instead of having scales, the skin is rough and coarse, similar to sandpaper. Toads might not play well in some restaurants, but many coastal cooks relish that tenderloin of white meat that lies along the backbone. Big's Restaurant on U.S. Rt. 13 near Painter in Accomack County usually features a toad platter among its daily specials.

The hardshell clam (*Mercenaria mercenaria*) is indigenous to the ocean side of the Eastern Shore and the salty waters of the lower Chesapeake Bay. Local folks have been eating clams in myriad ways for centuries. A personal favorite is the clam fritter, which is pretty much a pancake made with coarsely chopped clams. Here's how to do it. Make a batter consisting of about 12 chopped clams, one medium onion chopped, one

up joining you in the boat. It could be a croaker, which some call a hardhead. It could be a spot or pigfish or a flounder, or maybe a bluefish or a speckled trout. It could even be a swelling toad that will puff up like a buck-toothed softball with a two-day beard.

Another coastal locavore favorite is the hardshell clam (*Mercenaria mercenaria*). Clams are found on tidal flats at low tide and are plucked from the substrate with a rake or pick. Small clams that are steamed open and dipped into melted butter have a wonderful salty-sweet flavor like no other seafood. Larger clams can be chopped and made into chowder, or they can be sautéed with garlic and white wine and served over linguine. Clams can also be added to a batter to make fritters (see sidebar), or they can be mixed with potatoes and carrots and put into a crust to make

clam pie. The Native Americans had another use for clams. They fashioned the shells into beads and used the beads as money; hence, the Latin name *mercenaria*.

When it comes to making the best use of local foods, the Native Americans set the bar very high. They harvested the clam, ate its meat, and then converted the empty shell to cash. Now that's setting a good example. ❧

Curtis Badger, whose most recent book is A Natural History of Quiet Waters (UVA Press), has written widely about natural history and wildlife art. He lives on Virginia's Eastern Shore.



Left, put clams in the freezer overnight and when they thaw they can be easily opened with an oyster knife.
Above, clams can be located at low tide by finding small key-holes in the tidal flat left by the siphons the clam uses to ingest food. Such holes are called "sign." Photo ©Tom Badger



Clam fritters with new potatoes and crisped kale.

egg, ½ cup flour, 1½ teaspoons baking powder, and ½ teaspoon baking soda. Heat about a ½ inch of cooking oil in a fry pan. When the oil is hot, spoon a dollop of batter into it and let it fry until brown and crispy on the bottom, and then turn and cook it until done. Clam fritters cooked well are delicious. The key is to add the baking powder to keep the batter light and to wait until the oil is sufficiently hot before adding the batter.



by Jim Mize

Fish haunt me. They linger on the fringes of my memory, slipping in when someone mentions an old fishing partner, teasing me in the quiet hours, luring me into dark places. The fish I think of are neither ones I've caught nor ones I dream to catch. Those that torture me are the ones that got away.

My first tormentor moved into my head 40 years ago on the Smith River. The memory of the cold tailrace water splashing against my waders chills me still. The hair on the back of my neck mats down from the dampness in the fog.

As the water rose with the power generation, shad minnows from the lake above floated down, spasmodically twitching from

injuries sustained in the generators. With the steady progression of the current, they became more plentiful and the rushing water gave the moment a sense of urgency.

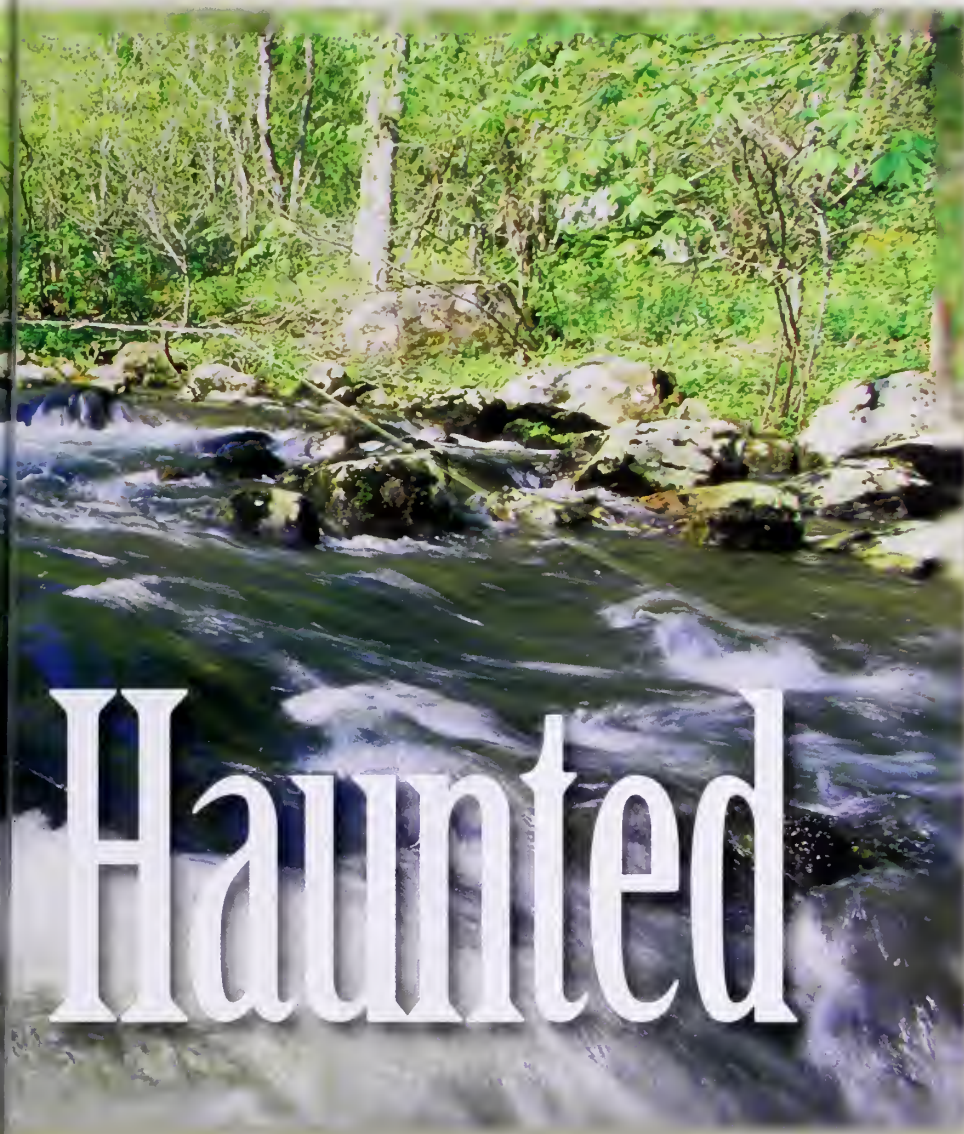
An old brown waited by the stump of a windfall for this window in the day. His vicious attack upon these minnows left no doubt of his carnivorous nature. He cared neither for stealth nor deceit as he crashed shad after shad in the rising water. The boils he created on the surface lingered after he struck, riding the current to disappear downstream.

I remember shaking out sufficient line for a cast, my young hands trembling as fly line rattled through the eyes of the rod. My first cast dropped the muddler four feet upstream of him. My nervousness made twitching the streamer automatic as I tried to imitate the dying shad. But the old brown let it pass.

He turned slowly, staring with those cold black eyes, meeting my gaze, then drifted back across the rising current to his dark domain behind the stump.

My second cast landed farther upstream still, and I twitched the streamer in short bursts like a child finding his way through a dark cemetery, dashing from tombstone to tombstone. The muddler came all the way in, no doubt glancing back over its shoulder and whistling the entire way.

By now the current had risen to my waist and time to fish was short. My third cast landed where the second had, but on this retrieve I decided to give the old carnivore his fair chase. With time slipping away, I made my fly hurry. I skipped the muddler quickly away, letting it



Haunted

leap from the surface as if it feared the water below.

The brown responded, jaws chomping close behind, leaving a wake as he came. At any moment, I am convinced he could have closed on my fly. Perhaps he enjoyed the suspense. Maybe he heard the music from Psycho playing in the background. But as I ran out of line to retrieve, my fly paused at the end of my rod as did the brown. He turned slowly, staring with those cold black eyes, meeting my gaze, then drifted back across the rising current to his dark domain behind the stump.

I shook with an adrenaline rush to which I became addicted in that moment. Forty years later, he remains in my memory as vividly as I have described him. His square tail, orange spots, and gnarled lower jaw might as well be on a photograph before me, so clearly do I see him.

He comes to mind whenever I see good brown trout water. I expect him to attack as if he followed me there, slashing out from a shadowed rock or from beneath a sodden log.

Though I would no doubt flinch, just such an attack is what I seek. I've come to crave the adrenaline of anticipation and the strike. No physician needs to check the strength of my heart. Surviving these on-stream tests is physical enough for me.

In all the years since, others have joined old brown to haunt me. On Philpott Lake, a largemouth once rose to a locust I'd flipped over a fallen tree; I wanted to see how bass behaved during a locust hatch. The mental video I see begins with his motionless drift upward, the tilt of his head for a better look, the rolling of his eyes to show the whites beneath, the slow parting of his lips to suck in the fly. His mouth looked like it could swallow a softball. His blood red gills flared. I can still see

At the moment I struck, the redfish realized the crab was lined with steel. The torque of his tail met my untimely strike, leaving nothing but leader on my retrieve.

the thick, mottled black stripe down his side, ending in a tail segment as thick as my wrist. Then, he swirled in a flash, completely avoiding the locust except for smacking it with his tail in a taunting wave good-bye.

I sat in the front of the canoe letting the jitters subside. I cannot spot a largemouth in clear water today without thinking of him. He has become the bass I use to measure all others.

These haunts were joined only recently by a redfish, tailing in a foot of water in grass thick enough to hold my leader in the air. Snails climbed the blades of grass in single file making it look bumpy from a distance. I tossed a crab pattern at the nose of the redfish, uncertainly. I couldn't tell where the fly lay or if the redfish saw it. Slowly the fish leveled beneath the surface and the fly line began to slide through my fingers like the buoy rope in Jaws. At the moment I struck, the redfish realized the crab was lined with steel. The torque of his tail met my untimely strike, leaving nothing but leader on my retrieve.

The fish may have been different, but the rush was the same. Perhaps adrenaline burns images into my brain. Maybe I have a fishing gene that records these episodes for later replays. Who can say?

All I know is that exorcising these haunts will take the rest of my days as I track the monsters to the ends of the earth, looking for these fish and their descendents, knowing that for all those I catch I face the risk of creating more memories to torture me.

All fishermen should be so blessed, so haunted. ❧

Jim Mize has collected the best of his outdoor humor in an award-winning book titled, The Winter of Our Discount Tent. Copies are available for \$18.95 plus shipping and handling by calling 1-800-768-2500.

Unraveling the Mystery

The Disappearing Allegheny Woodrat

story by Cristina Santiestevan

illustrations by Spike Knuth



Be Wild! Live Wild! Grow Wild!



Allegheny woodrats once ranged from Connecticut to northern Alabama, finding food and shelter among the ridges and highlands of the Appalachian Mountains. Over the last three decades, they have completely disappeared from New York and Connecticut, and have declined significantly elsewhere. Allegheny woodrats are considered a species of concern by the U.S. Fish and Wildlife Service, and are listed as threatened or endangered or a species of concern in nearly every state where they occur. No other rodent is listed as threatened or endangered by more states than the Allegheny woodrat.



Allegheny woodrats have little in common with the familiar Norway rat—also known as the brown rat, common rat, or wharf rat—which was likely introduced to the United States in the 1500s with arrival of the first European ships. The Norway rat has since spread throughout urban and suburban habitats from Boston to San Francisco. Unlike the Norway rat, our native Allegheny woodrat generally lives far separated from humans, has a fully furred tail, and maintains a vegetarian diet.

Adult Allegheny woodrats rarely measure more than 12 inches from the tip of their nose to the end of their tail, which accounts for fully half of their length. They generally weigh between 8.5 and 11.2 ounces and are the second-largest native rat species in North America. As with many species of rat and mouse, Allegheny woodrats have large, rounded ears, long whiskers, and bulging eyes, all of which contribute to acute senses of hearing, touch, and sight. The woodrat bears a brownish-gray coat on its body and tail, with white undersides and feet.

Here in Virginia, Allegheny woodrats are only found in the western, mountainous counties, where they seek shelter amidst the caves, rocky ledges, overhangs, and boulder fields of the Blue Ridge Mountains, Appalachian Mountains and Plateau. Woodrats are not diggers. Instead, they construct elaborate nests of twigs, mosses, bark, and leaves. Nests are generally lined with a bedding of grasses, shredded bark, and fur. Allegheny



Many voles, shrews, mice, and rats feed on nuts and berries, and the woodrat (shown here) is no exception. But this particular rodent is known by another, more unusual habit. Among the items it likes to collect are shiny pieces of glass and metal, and nail clippers (left) fit the bill.

woodrats will use their nests year-round. Abandoned woodrat nests may be colonized by opportunists such as white-footed mice, snakes, toads, and spiders.

Woodrats are nocturnal foragers, and venture as much as one kilometer from their nest site in search of a mate or in pursuit of their vegetarian diet. Native flora such as

common persimmon, Virginia creeper, Eastern red cedar, and acorns are among the most important foods for Allegheny woodrats. The rats also will consume green vegetation, assorted berries, and mushrooms. Anecdotal evidence suggests that American chestnuts were once an important part of the Allegheny woodrat diet.



Adult Allegheny woodrats are generally solitary and maintain and defend territories that may be as large as a half-acre. The woodrats breed from spring to fall. Most litters average 2.2 pups in Virginia and the average female raises one litter, and rarely two, in a single year. The pups are born naked with eyes closed, and will nurse for about a month before weaning. If they do not fall prey to their many predators—foxes, bobcats, weasels, owls, skunks, raccoons, hawks, and snakes—Allegheny woodrats may live up to four years in the wild. Researchers know of one survival of 54 months.



Scientists are unsure why Allegheny woodrats have declined so rapidly in the past few decades. The list of possibilities includes loss of oaks and acorns, chestnut blight, and a parasite commonly found in raccoon feces. Whatever the cause may be, the consequences are already obvious: Allegheny woodrats are disappearing from places that were long known to be their home.

Of the states within their historic range, Allegheny woodrats have already disappeared from New York and Connecticut, and are

considered endangered in New Jersey, Ohio, and Indiana. Throughout the rest of their range—Alabama, Maryland, North Carolina, Pennsylvania, Tennessee, Virginia, and West Virginia—the woodrats are listed as either threatened or a species of concern. Kentucky is the only state that has not designated their resident population of Allegheny woodrats as endangered, threatened, or a species of concern.

Food may be a large part of the problem. A decline in food, to be more specific. Like many forest-dwelling animals, Allegheny woodrats probably once relied on chestnuts as

a substantial part of their diet. In some areas, this large, nut-bearing tree comprised nearly half of the forest canopy. The arrival of chestnut blight—and the ultimate collapse of the American chestnut population—left many animals scrambling to find another food source. Some studies suggest that small rodents, such as white-footed mice and chipmunks, responded the most negatively to the chestnut's demise. Why not also the Allegheny woodrat, another small rodent?

Since the loss of chestnuts, many nut-eating animals have shifted their diets toward oaks, which have largely occupied the ecological niche once held by the larger chestnuts. White-tailed deer, wild turkey, black bear, Allegheny woodrats, and other rodents all consume the nut crop—or, mast—of oak trees. One recent study found a strong correlation between woodrat population numbers and the previous year's acorn crop. This suggests Allegheny woodrats rely heavily upon acorns as a food source, perhaps as an essential part of their stored winter diet. If so, this reliance may also help explain the decline of Allegheny woodrats.

A decline in food for Allegheny woodrats could also possibly be attributed to a substantial rise in the white-tailed deer and black bear populations, both of which may compete with the woodrats for food. Likewise, maples and other shade-tolerant trees may out-compete oaks in some areas, especially where whitetails actively browse, contributing to a smaller crop of acorns every fall. Long-term fire suppression, which allows understory trees such as maples to flourish, may also be contributing to the decline in oaks.

There is also the problem of raccoon feces. Allegheny woodrats cache dried raccoon feces in their winter food stash—the dried feces often contain a high number of undigested seeds, which the woodrats will eat. Unfortunately, some of these feces are also infected with a roundworm, *Baylisascaris procyonis*. Most *B. procyonis*-infected rodents

ultimately contract and succumb to a fatal neurological infection. This negative relationship between rodents and *B. procyonis* suggests that Allegheny woodrats might decline dramatically in areas where raccoons are commonly infected with this particular roundworm.

In addition to these challenges, Allegheny woodrats may also be declining as a result of increased human recreational use of forests, decreased forest cover due to development, or increased predation from natural or invasive predators—including the domestic house cat. As with many species, there are probably multiple underlying causes behind the decline of Allegheny woodrats.



Population crashes and local extinctions are serious matters with any animal or plant species. But, in this case, many people might wonder: "Why? Why worry about a rat?" True, rats are probably not the best-loved

species in the forest. But, the Allegheny woodrat is a far cry from the familiar rats of our cities and towns. As a native species that occupies a unique ecological niche, the Allegheny woodrat provides food for its predators, and spreads nutrients—in the form of seeds, nesting material, and feces—through its often nutrient-poor habitat of rocky ridges and caves. The Allegheny woodrat is an important part of the Appalachian food web.

And, of course, there's the simple fact that every species deserves the opportunity to thrive. ❧

Cristina Santiestevan writes about wildlife and the environment from her home in Virginia's Blue Ridge Mountains.





Kings of the

Cobia continue to entice anglers to try their hand at landing this feisty combatant.

by Ken Perrotte

From the tower above the console on his 23-foot Dusky, Capt. Jorj Head announces, "It's looking awful fishy in here, a lot of bait in the water, a nice tide line."

The weather was beautiful this early August morning with low humidity, mostly sunny skies, and the faintest of breezes. You couldn't have ordered a better day for sight-casting for cobia, the summertime kings of the Chesapeake.

"Cobia, just ahead—about 50 yards," yells Head from the tower.

He chopped the motor and quickly cast a baited live eel to the cruising fish. With a powerful swirl of its tail, the cobia surged toward the bait. As the slack line began tightening, Head flipped the bale closed on the Shimano Static spinning reel, cranked the line taut, and struck with the hook.

Wham! The powerful surge of a now seriously agitated cobia stripped line from the reel, first moving directly away from the boat and then turning in a mad, circular run to the stern. The cobia moved under the boat, around the boat, and then circled deep, bending the 7-foot medium-heavy action rod into a tight bow. In a thrashing, huge spray of water on the surface, the cobia battled all the way to the net.

With a couple of fish already on ice, this 48 inch was destined to be quickly measured and have an orange, plastic tag inserted just under its skin along the dorsal fin before being released.

Bay

Sight-casting and Chumming

Striped bass and flounder are longtime Chesapeake Bay fishing staples but, come summer, cobia captivate a growing legion of anglers.

A fish that will quickly grow up to 6 feet long, can weigh more than 100 pounds, wallops live bait, and then gives fishermen a fight that leaves them exhausted and drenched in summer sweat commands respect. Two favored approaches to cobia fishing are sight-casting for fish swimming near the surface or chumming to attract them to the bait.

Head is an elementary school teacher by profession. Summers off allow him ample time for guiding and pursuing his fishing passion. He specializes in finding cobia cruising near the water's surface. The fish are often found hugging channel marker buoys but, under optimal conditions, sharp-eyed anglers can spot them in open water. The tower that Head added to his boat affords him a better view.

Cobia are rarely tentative when presented with a tasty meal. While they will sometimes hit big bucktail jigs, live bait is tough to beat—with eels or fish such as croaker or spot in the 8- to 12-inch range always enticing.

These fish usually attack the bait within seconds of it hitting the water. A proven tactic is to watch the line and wait for it to move. Reel in slack while pointing the rod tip toward the fish; then, firmly snap the rod tip back to set the hook. Expect a powerful run once that hook is set, with more runs when the fish nears the boat.

"We lose more fish right at the boat than anywhere else," Head admits.

Powerful fish demand sturdy tackle and well-tied knots. Head spools his reels with 50-pound PowerPro braided line and finishes up with 80-pound monofilament leader. He has taken to using a Bimini Twist knot to attach the braided line to the leader, preferring it over an Albright.



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Left, Capt. Jorj Head scans the warm summer waters of the Chesapeake Bay, looking for cobia swimming near the surface. Above, Wes Blow opens a container of frozen, ground menhaden to add to the chum bucket.



©Ken Perrotte

Wes Blow readies a live eel. Eels make a tempting bait for big cobia.



Wes Blow hoists a hefty, healthy cobia. Some mistake cobia for sharks when they see the fish swimming near the water's surface.

While Head uses size 7/0 Gamakatsu Octopus live bait hooks, Newport News resident Wes Blow supersedes things, using the same hook in a 10/0 while spooling his reels with 80-pound braided Power Pro line and 80-pound Ande leader. He likes the hooks so much he has their stock number memorized.

Blow is rapidly earning recognition as a cobia master. While he'll sight-cast to cobia near buoys, his smaller 18-foot Sea Pro isn't designed for finding fish in open water. Instead of hunting for the fish, Blow locates areas where cobia frequent and attracts them with chum, using his own blend of ground menhaden and menhaden oil.

Blow, a salesman for an auto retailer, caught a phenomenal 105.5-pound cobia not far from Hampton in 2009. The fish had completely spawned and had an empty stomach. Pre-spawn, that fish likely would've demolished the existing record of 109 pounds caught in 2006 in a Hampton tournament.

What makes Blow's cobia catching prowess so remarkable is that he often fishes alone. He once fell overboard while battling a fish, but was wearing a self-inflating life vest and managed to grab a line near the stern and haul himself back aboard.

Blow hits the water with a live well teeming with eels, two ice chests full of frozen

chum, and a couple of gallons of Gatorade and water. If time permits, he'll try to catch a few small croakers or spot to add to the bait mix.

From there, it's a question of analyzing wind and current and picking one of several honey holes he has identified over the years. After anchoring, Blow sets one floating chum bucket high and sinks another to the bottom. The stout rods closest to the boat have hefty, 8-ounce pyramid sinkers to get bait close to the source of the lower chum slick. The other set-ups have slightly lighter sinkers, and the bait is cast 20–30 yards off the stern. Four lines are baited with eels while one gets a



©Ken Perrotte

usual practice of clearing the other baited lines from the water. Predictably, Murphy intervened. The fish surged, wrapping every other line as it circled the boat. The fish was lost in the morass, but Blow noticed his rod rigged with a Shimano 4500 Baitrunner spinning reel was slightly bent over, so he picked it up. A fish was on but the lines were still hopelessly tangled.

While Blow spools his reels with different color line to facilitate untangling, the only way to get this fish in was to cut the lines to remove the mess.

"I cut and wrapped it around my hand with the fish connected and held on while splicing the line back together," Blow explains.

This dicey mission complete, Blow attempted to wind in line. At the pressure, the cobia made a powerful dash that nearly stripped the reel of every inch of line. Blow realized this fish was bigger than estimated. He also understood he was lucky he hadn't applied pressure while 65-pound braided line was wrapped multiple times around his hand. Torn or lost fingers or worse might have been the outcome.

Once the fish was back under control, Blow called friends to see if anyone was in the area who could help him get the fish netted or gaffed and in the boat. The cavalry arrived soon after and the gigantic cobia was hauled over the gunwale.

"I can't imagine any fish more exciting to catch than a cobia. I hope I land one someday, but I doubt I will," Blow says.

Fast Facts

- ◆ Cobia are a pelagic fish, closely related to remoras, often seen hanging close to sharks. They are found in open ocean waters ranging from tropical to subtropical and temperate, and range along the East Coast as far north as Massachusetts.
- ◆ The world record cobia was caught in Shark Bay, Australia in 1985. It weighed 135 pounds 9 ounces.
- ◆ Female cobia mature at 36 inches and 3 years; males mature at 24 inches and 2 years. Females produce from 377,000 to 1,980,500 eggs.
- ◆ In Virginia, the cobia limit is one fish (greater than 37 inches) per angler per day. They make excellent table fare.
- ◆ Cobia arrive in the Chesapeake Bay when the water reaches 68 degrees.
- ◆ Besides anchoring and chumming for cobia, sight-casting live bait to the fish can be successful, especially if the cobia are found near floating platforms, such as buoys.

croaker. Live eels also wrap around lines, so Blow retrieves bait periodically to ensure things are swimming freely. Chumming can also attract sharks and rays, sometimes in quantities so thick it makes sense to relocate to focus again on the target species, cobia.

Blow's monster cobia catch was an incredible feat. He was working a smaller cobia toward the boat and figured the fish was quickly destined for the net. He neglected his

Capt. Jorj Head prepares some thick cobia steaks for the ice cooler. Carefully prepared, cobia are some of the finest tasting fish to eat.



©Ken Perrotte



A small, tagged cobia is readied for release in the Chesapeake Bay.



Weaned juveniles, 40 days old.

Conservation Key

Cobia fishing's increasing popularity creates natural concern for the sustainability of the resource.

"We're seeing more and more boats out here looking for cobia," Head notes, gesturing toward several other groups of anglers working the waters near the Chesapeake's Baltimore Channel. The captain hoped aloud that all anglers were adhering to the one fish over 37 inches long per person limit and expressed a view that more law enforcement on the water during the cobia season could deter those predisposed to violating the law.

Mike Oesterling, a retired scientist with the Virginia Institute of Marine Science (VIMS) at Gloucester Point, spent many years researching cobia, trying to ascertain if stocked fish could augment natural populations should conditions ever demand it.

"We do not believe stocks of cobia are currently in trouble," Oesterling says. The good news is that if trouble does come, stock enhancements appear doable.

In 2000, the first successful spawning and culture of cobia beyond the larval stage within the U.S. was accomplished by the VIMS scientists. Hundreds of cobia were raised and then tagged and released in 2003, 2005, 2008, and 2009. The fish were all between 8 and 27 inches when released; too small for anglers to legally keep if caught.

Several questions loomed. Will cobia raised in a confined setting survive and grow when released? Will they behave like wild

cobia? Will they migrate and return to where they were released?

Happily, the uniform answer is, "Yes!"

Nearly 20 percent of the tagged fish were caught again, some more than once. Tagged fish were caught at the Hampton Roads Bridge-Tunnel, in the Mobjack Bay system, along the eastern side of Chesapeake Bay near the popular fishing site known as "The Cell," and elsewhere.

Researchers collected a treasure trove of data with "credible anglers" reporting that tagged cobia associated with wild fish, fed voraciously and opportunistically, fought like wildcats, and made the characteristic migration south in winter.

Oesterling also sees increased fishing popularity, noting, "North Carolina's fishing has exploded in the spring when cobia are migrating through."

Cobia tournaments attract huge followings. While tournaments are good for the economy and excitement related to a fishery, Oesterling warns that those big fish brought to the weigh-ins are almost always females.

"Fecundity also increases as that female fish gets bigger. Rarely do male cobia get over 50 pounds," he reports. "The majority of the cobia have spawned by the end of June, but some spawn all the way through August," adds the scientist.

Oesterling thinks cobia release most of their eggs near the mouth of the bay where salinity is higher. Egg release can occur over a series of days.

Both Blow and Capt. Head participate in the ambitious game fish tagging program coordinated by the Marine Advisory Program at VIMS and the Saltwater Fishing Tournament office at the state's Marine Resources Commission. The program lets conservation-minded anglers assist in collecting scientific information about the movements and biology of fish by tagging targeted species. Anglers catching an orange-tagged fish should report it at www.vasaltwaterjournal.com/report_tagged_fish.php.

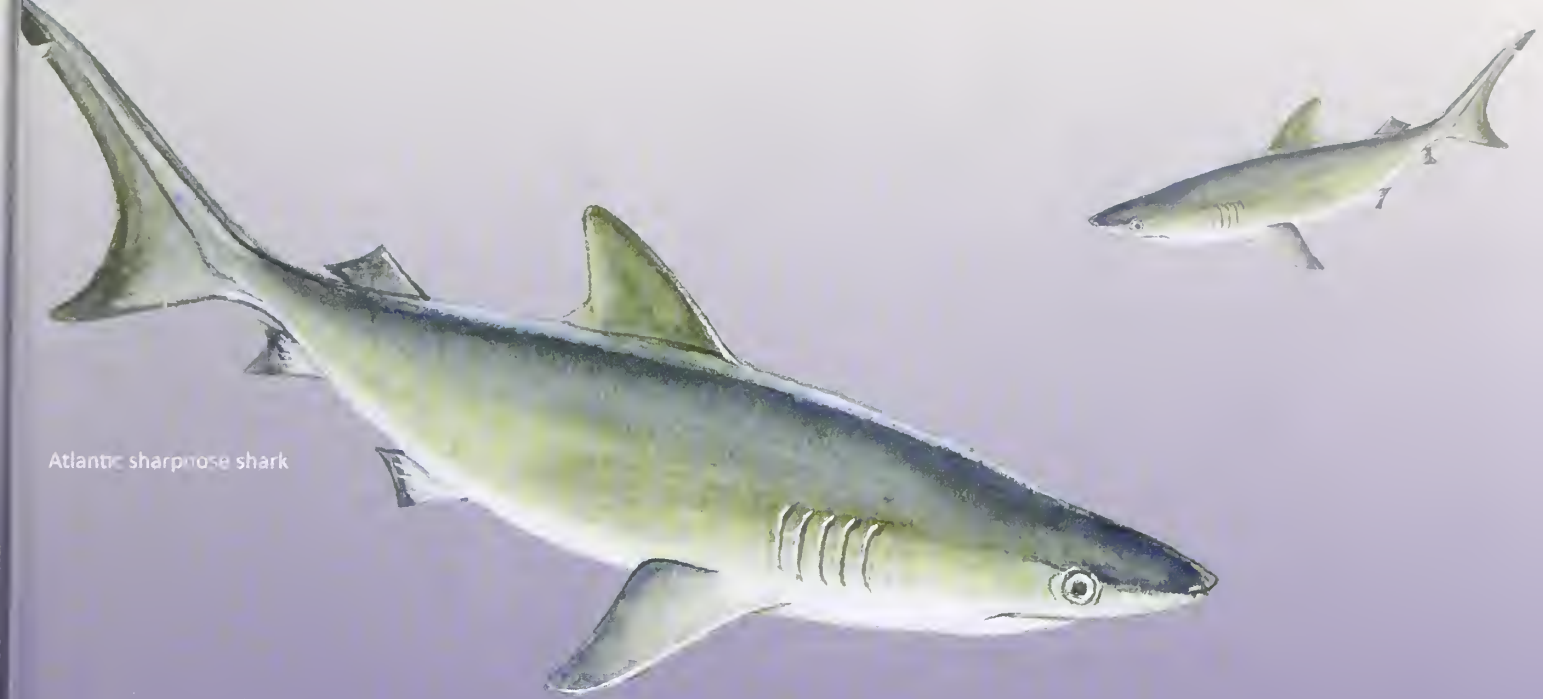
We tagged and released several fish during our 2010 cobia forays.

Oesterling adds that his research study has some fish still out there with tags. "I'd sure like to get a few more returns to enter into the database," he says. Anyone catching one of these earlier, yellow-tagged fish can call program coordinator Susanna Musick at VIMS, at (804) 684-7166. ☛

Ken Perrotte is a King George County resident and the outdoors columnist for Fredericksburg's Free Lance-Star newspaper.

RESOURCES

- Capt. Jorj Head: (757) 262-9004
- Virginia Game Fish Tagging Program: www.vims.edu/vgftp
- Virginia Institute of Marine Science, Tagging Program: www.fisheries.vims.edu/tagging/cobiatag.htm



Atlantic sharpnose shark

A Call For Shark Conservation

story by William H. Funk ♦ illustrations by Spike Knuth

In a world older and more complete than ours they move more finished and complete, gifted with extensions of senses we have lost or never attained, living by voices we shall never hear.

—Henry Beston,
The Outermost House (1928)



Tiger shark

Sharks are central to the health of our oceanic ecosystems, and their loss is triggering immense changes around the globe.

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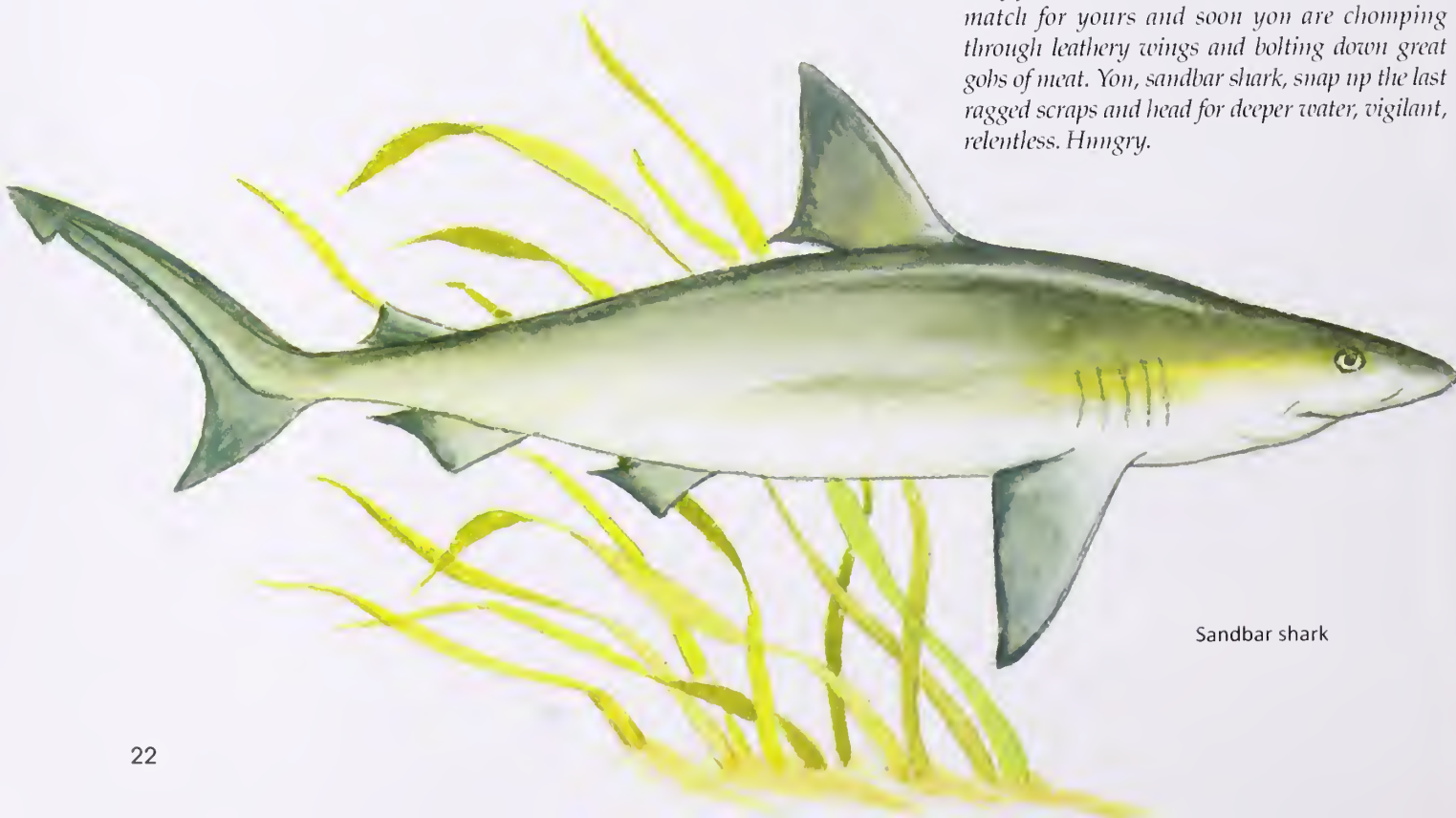
unger. You have rarely known a moment free from its terrible grip, lashing you ever onward in search of sustenance. Since your live birth almost 20 years ago at the great nursery grounds in the southern Chesapeake Bay, you have hunted the Atlantic coast of North America from New England to Mexico, feeding on benthic fishes, smaller sharks and dogfish, rays, and crustaceans. You are nearly 6 feet long, weigh 110 pounds, have the darkened anterior and lighter belly of most sea animals, and are possessed of the sinewy strength, hydrodynamic frame, and unappeasable appetite of your kin.

This evening in late summer you are patiently cruising the seafloor, snapping up what blue crabs you can find as you hunt the sloughs between sandbars. Your elliptical eyes are able to see easily in the turbid waters near shore due to the crystal mirrors, called tapetum lucidum, behind your retinas which amplify light passing through the lenses by bouncing it back again to the photoreceptors. Your great dorsal fin occasionally breaks the surface in this shallow area, but you concentrate on the sandy bottom as you search for your preferred prey. You surprise an Atlantic guitarfish as it is rooting for clams, but it kicks up a spray of sandy muck as it flees and your bite goes wide. Calmly you resume the hunt,

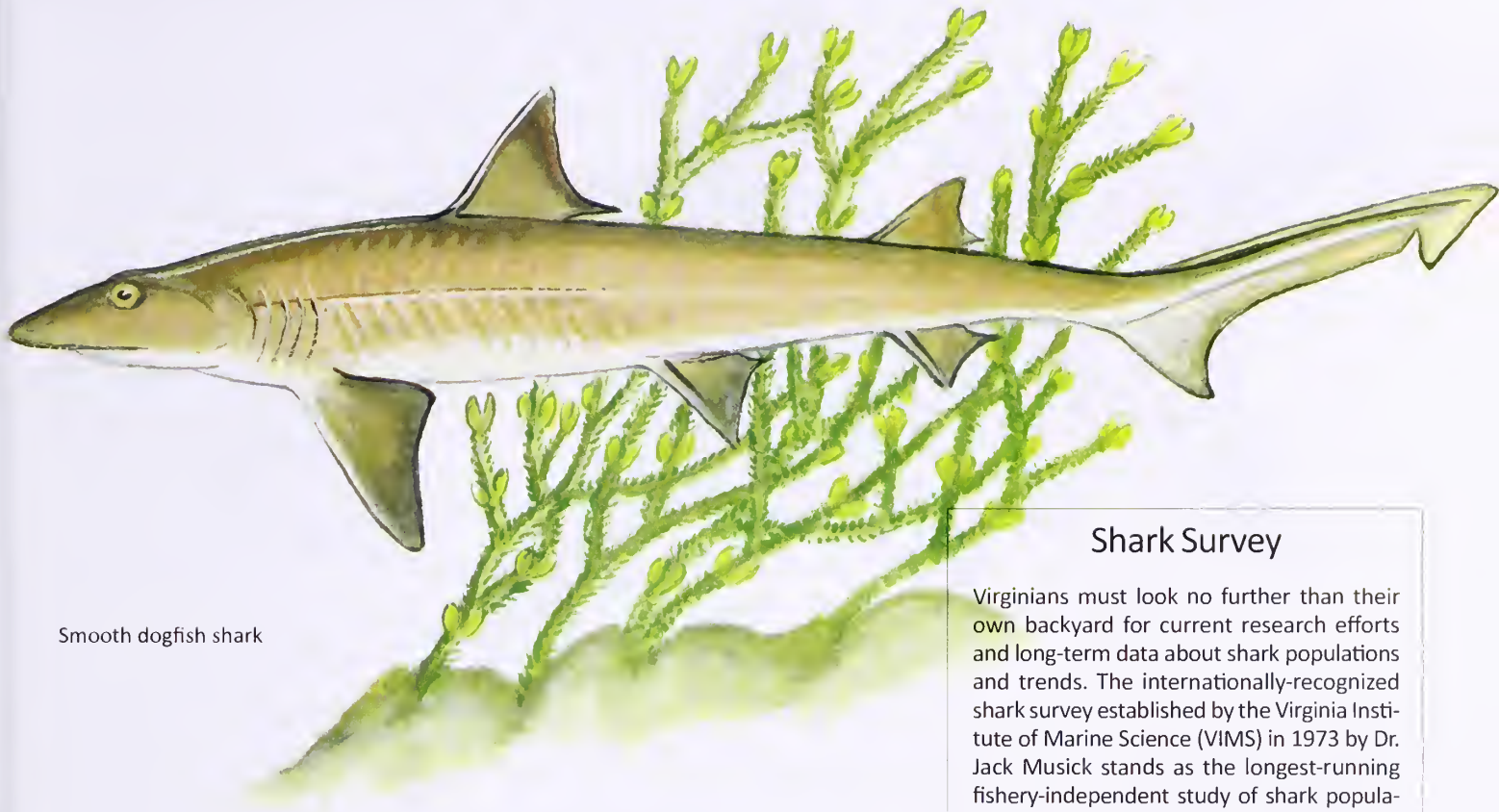
tirelessly undulating the powerful muscles of your tail and caudal fins as you move closer to the sound of breaking surf.

The hunting in the great bay is not what it was and most prey species are getting harder to locate. You breathe in the familiar stench of the chemicals that poison your world: polycyclic aromatic hydrocarbons, the result of burning fossil fuels washed off coastal parking lots and streets; organophosphate and organochlorine pesticides from npriver farms, some as far away as the Shenandoah Valley where your ancestors swam in a sea that evaporated eons ago. Having consumed arsenic and mercury in the fish and shellfish that frequent your habitat, your liver is bloated with 20 years of toxic metal bioaccumulation. Your very success as a hunter is slowly killing you.

An array of electrical sensors—the ampullae of Lorenzini—are clustered about your flattened snout, tiny mucous-filled pits that can receive the vague bioelectrical impulses emitted by all living things, allowing you to successfully hunt on cloudy nights by zeroing in on bioelectrical signatures. Suddenly you register a new electrical field and move into shallower water to investigate. A school of cownose rays, a species whose numbers in the Chesapeake Bay have exploded in your lifetime, is slowly flying through the turbid water along the shore. With a stiff flick of your tail you suddenly change course and accelerate into their midst. They flush in all directions, but their speed is no match for yours and soon you are chomping through leathery wings and bolting down great gobs of meat. You, sandbar shark, snap up the last ragged scraps and head for deeper water, vigilant, relentless. Hungry.



Sandbar shark



Smooth dogfish shark

Fishes are the world's most widespread branch of vertebrate animals, with over 25,000 species extant today. Elasmobranch fishes, those with skeletal systems composed chiefly of flexible cartilage rather than bone, include sharks, rays, and skates, and number around 800 species worldwide. The shark lineage (Order *Selachii*, Family *Pleurotremata*) dates back 400 million years, to the Paleozoic ("old life") Era when the first jawed fishes were evolving, prior to dinosaurs, trees, and even insects. So successful was the selachian design that was forced to change little as the slow eons passed: its incredible senses, devastating power, and generalist appetite combining to form the perfect marine predator.

Selachian anatomy is geared toward the single purpose of oceanic hunting. The cartilaginous skeleton allows for tremendous flexibility while reducing body mass. Even the heavy jaws, vertebrae, and some areas of the skull lack true bone but are simply cartilage that has been strengthened by calcification. Shaped like jet fighters or torpedoes, the shark's tapered form maximizes the flow of water as it swims, while its prominent fins provide superb stability and stamina. Unique sub-dermal connective

tissues move the entire body's strength toward the tail which, with a few stiff lateral movements, can propel the shark in bursts of amazing speed—up to 22 miles per hour for the powerful mako.

Shark skin is layered with denticles, tiny tooth-like scales that reduce drag while providing the animals with a kind of spiky armor. The formidable jaws are specifically designed for seizing and slicing into prey. The upper jaw is loosely attached to the skull by ligaments which allow it to detach, protrude, and gape wide to engulf smaller fishes as well as to grasp and tear flesh from the bodies of larger animals.

The teeth vary in size and shape according to the prey base of the species, with fish eaters having more pointed, backward-facing teeth and mammal hunters or generalists having the familiar triangular shape. Both types are regularly replaced by the rows of growing teeth set farther back in the jaws.

Sharks are some of the very few animals left on Earth that retain the capacity to kill and consume human beings, but the threat they present us—despite the tragic reality of the occasional attack—is so rare as to be statistically insignificant: an individual is three times more likely to be hit by lightning than

Shark Survey

Virginians must look no further than their own backyard for current research efforts and long-term data about shark populations and trends. The internationally-recognized shark survey established by the Virginia Institute of Marine Science (VIMS) in 1973 by Dr. Jack Musick stands as the longest-running fishery-independent study of shark populations in the world. The program has brought global attention to significant declines in shark populations due to overfishing, and led to the first U.S. management plan for sharks in 1993.

In addition to increasing our understanding about the demographics of sharks worldwide, scientists and graduate students at VIMS continue to inform our understanding of habitat use, growth rate, and reproduction. Their work has identified Chesapeake Bay and Virginia's seaside lagoons as the *principal* nursery area for sandbar sharks in the entire western North Atlantic.

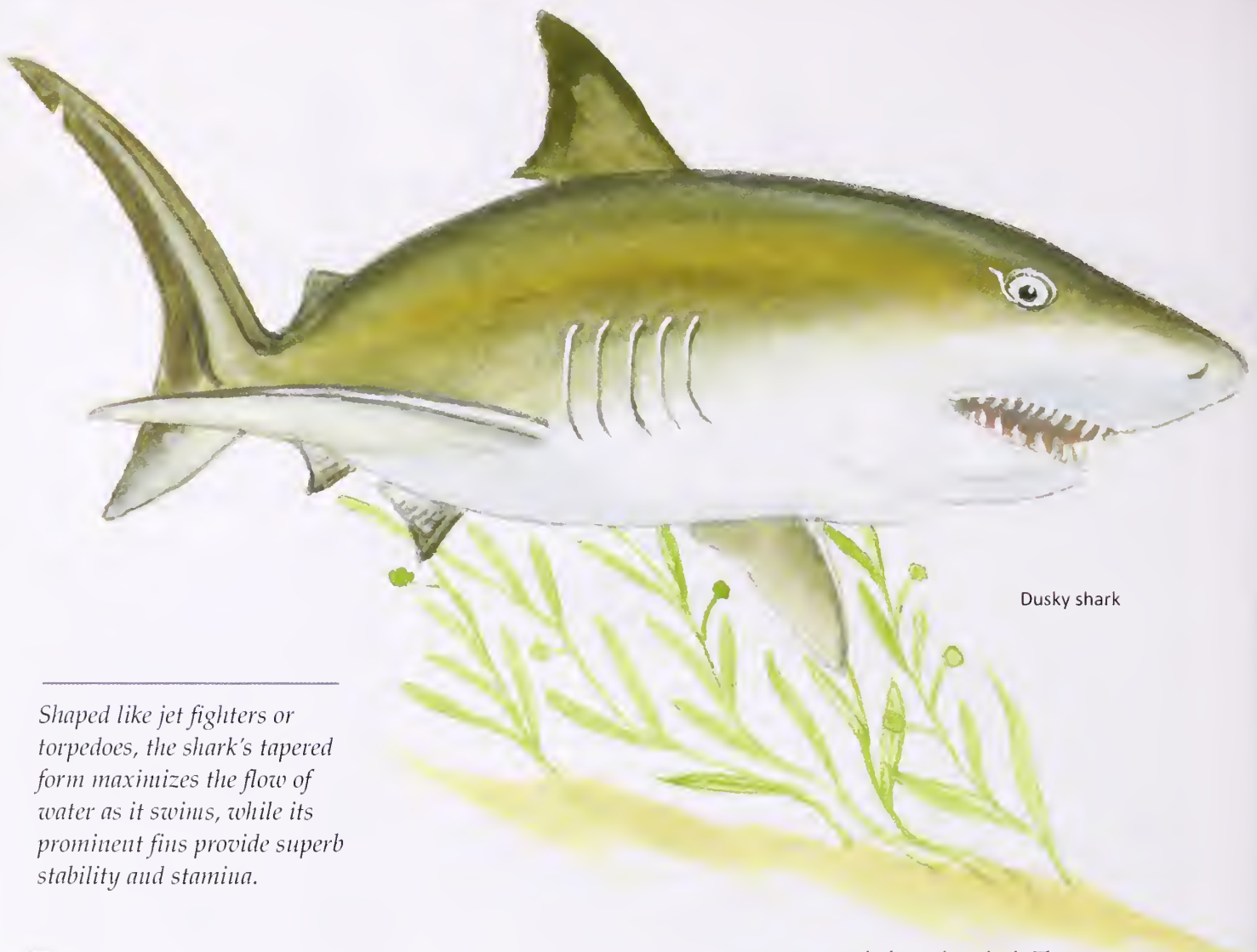
Food-web dynamics are of critical concern, because in the world's oceans sharks are an apex species and key to the proper functioning of the marine ecosystem. According to Musick, "Sharks are at the top of the food web, and when you remove the apex predators, it throws everything out of whack. Their prey items become more abundant, and tend to over-eat things below them."

Current program director Tracey Sutton adds, "To maintain a healthy ecosystem you have to maintain a certain level of upper-level predators."

For information about the shark survey conducted by VIMS, go to:

www.vims.edu/features/programs/shark_survey.php.

SOURCE: Virginia Institute of Marine Science Website



Dusky shark

Shaped like jet fighters or torpedoes, the shark's tapered form maximizes the flow of water as it swims, while its prominent fins provide superb stability and stamina.

CAUSE FOR ALARM

- Off the Virginia coast, scalloped hammerhead and tiger sharks may have declined by more than 97 percent from sustainable populations; bull, dusky, and smooth hammerhead sharks by more than 99 percent. The valuable ecological role played by these sharks as large predators has effectively been extinguished.
- The legal limit for consumption of methyl-mercury, set by the U. S. Environmental Protection Agency, is 0.1 microgram per kilogram of body weight. Studies have shown shark meat contains as much as 1,400 micrograms of methyl-mercury in one kilogram.
- It is estimated that cownose rays in the Chesapeake Bay consume 840,000 metric tons of shellfish during their roughly 100-day occupancy. The 2008 Virginia oyster harvest was just under 160 metric tons. However, attempts to address shellfish loss through the marketing of these rays as table fare is ill-conceived: According to the Virginia Institute of Marine Science, these rays are slow-maturing fish, with females not reproducing until they are 7 or 8 years old and birthing just one live pup per year. It would be far more logical to protect the natal grounds of the sharks that are the rays' chief predators and restore the ecological imbalance caused by overfishing.

to be bitten by a shark. There were an average of 32 shark attacks per year in U.S. waters between 1990 and 2004. Of the 490 attacks during this 15-year span, 11 were fatal. According to the International Shark Attack File (ISAF) one's odds of being bitten by a shark are 1 in 11.5 million; your likelihood of being killed are 0 in 264.1 million, nearly impossible. You'd have much better odds of winning the lottery than of being killed by sharks, and even the rise of shark attacks over the past several years can be demonstrably traced to the concurrent increase in human populations and interest in marine activities.

Last year the ISAF investigated 115 alleged incidents of shark-human interaction occurring worldwide. Upon review, 79 of these incidents represented confirmed cases of unprovoked shark attacks on humans, "unprovoked attacks" being defined as incidents where an attack on a live human by a shark occurs in its natural habitat without human provocation. That's 79 substantiated shark attacks, hardly a percentage of the gen-

eral population sufficient to elicit much angst. These calming scientific pronouncements do little to quell the terror evoked by the spectacle of death in the sea foam, yet when viewed dispassionately, as all credible science-based policymaking must be accomplished, the world's selachians are in far greater danger than are beachgoers.

According to William & Mary's Virginia Institute of Marine Science, the shark species most typically found off Virginia's coasts include sandbar sharks, smooth dogfish, Atlantic sharpnose sharks, spinner sharks, and to a lesser degree, scalloped and smooth hammerheads, tiger, sand tiger, blacktip, bull, and dusky sharks. Each of these creatures has followed its own path through the un pitying fields of time and winnowed out their competitors through the supreme balance of evolutionary give and take. Yet their numbers are falling every day as millions are taken to supply an inane "delicacy" while their breeding grounds are contaminated and destroyed.

The greatest threat to sharks today is overfishing throughout the world's oceans; a threat intensified by countries—including a wealthy Asian market—that sweep the seas clean to feed their lust for shark-fin soup and "traditional medicines." Combine this with pollution, coastal development, diseases, and an implacable fear and hatred of sharks, and it's easy to see why these marvelous animals are being exterminated. As I write this, a shark conservation plan proposed by the United Nations and backed by the U.S. was defeated by a cabal of industrial fishing interests, including China, Japan, Russia, and many Third World countries, opening the way for

continued decimation of shark populations and the inevitable extinction of endangered representatives of these slow-breeding creatures. Cynical pleas for the economies of poor coastal countries, along with the myopic denial of scientific findings buttressed by an instinctive lack of sympathy for sharks, have combined to crush even the most basic of protective strategies, thereby consigning millions more sharks to an agonizing death.

Looking out over the seemingly boundless sea, people have for thousands of years been drawn toward thoughts of the eternal and infinite, even though our visual range is limited to about 12 miles due to the curvature of the Earth. What has become crystal clear is that the oceans are hardly unlimited, that through overfishing, climate change, and the acidification and carbonization of seawater

resulting from the burning of fossil fuels the state of the marine world is dire indeed, from dying coral reefs and "dead zones" to vanishing phytoplankton and the annihilation of entire genera of large animals.

The oceans are finite, fading, and rapidly being emptied of their most magnificent denizens. We needn't declare open war on sharks to ensure their demise and the catastrophic repercussions it would have on the world's oceans; we can merely sit back, do nothing, and let greed and inertia do the work for us. Sharks are central to the health of our oceanic ecosystems, and their loss is triggering immense changes around the globe. Only by conquering our superstitions and avarice can these great animals continue a journey that has been hundreds of millions of years in the making. ❧

William H. Funk is a nature writer and aspiring documentary filmmaker living in the Shenandoah Valley. He may be contacted at williamfunk3@verizon.net.



Sand tiger shark



Atlantic sharpnose shark

The Resilient Brown

story and photos
by Emily M. Grey

Gliding over Atlantic whitecaps off Assateague Beach are silhouettes of a quirky looking avian trio. Suddenly, a fourth plunges into a trough, emerging with fish slithering down its enormous throat pouch.

Life was not always easy for the Eastern brown pelican (*Pelicanus occidentalis carolinensis*). Once, this species was killed on the mistaken belief that it consumed commercial fish headed for market when, in fact, it prefers menhaden and other fish not destined for the dinner table.

Appalled that pelicans were being killed for their feathers, in 1903 President Teddy Roosevelt set aside Pelican Island in Florida as a refuge for pelicans, egrets, and terns. The Migratory Treaty Act of 1918 further protects brown and American white pelicans.

Before it was federally banned in 1972, highly toxic DDT nearly eradicated the brown pelican, causing eggshells to become thin and thwarting reproduction. After a population rebound, in 1985 the U.S. Fish and Wildlife Service dropped the bird's endangered status in Virginia and North Carolina.

By the late 1980s, this species began inhabiting Virginia in significant numbers. In 1987, Fisherman Island National



Pelican

Wildlife Refuge became the first enduring nesting colony in the state. Unfortunately, marauding raccoons and predatory gulls stole and consumed eggs and young birds at Fisherman that may have eventually driven pelicans to new nest sites in 2009.

The government responded. "The refuge's management efforts have reduced the raccoon population to manageable levels," says Ruth Boettcher, a DGIF biologist based on the Eastern Shore. "Someday, pelicans may return to Fisherman Island."

"The population is maintaining an increasing trend in the state," Boettcher adds. "Between 1993 and 2008, the Virginia population increased from an estimated 368 to 1,924 breeding pairs."

Brown pelicans nest in secluded colonies on vegetated dunes along the Eastern Shore's bayside and seaside from April through about



mid-August. A typical clutch is three eggs, incubated by both parents. Fledged chicks will often form crèches at the colony site and continue to be fed by adults into mid- or late fall.

A grayish-brown body and blackish belly signifies a breeding adult. Its white head and neck are often washed in yellow. The foreneck has a yellow patch at the base, and the hindneck is dark chestnut. First-year birds are browner and acquire adult plumage during the third year.

A clutch of two or three eggs is most common. The young are covered with white, downy feathers and rely upon both parents for food; they fledge at 9 weeks.





Brown pelicans are found in coastal salt bays and beaches and breed on coastal islands.

With a wingspan of approximately seven feet, brown pelicans can weigh from eight to ten pounds and reach 54 inches in length. There are five subspecies, the smallest of the world's seven pelican species.

From 1999 through 2010, 23,760 brown pelicans were banded in Maryland and the central Chesapeake Bay area. According to locals on Smith Island in Maryland, thousands of brown pelicans have nested on nearby Shanks Island in Virginia during the past ten years.

"The colony on Shanks is in jeopardy because the island is shrinking due to erosion and sea level rise; however, the site near Quinby Inlet appears stable for now and is under protective ownership by The Nature Conservancy," Boettcher explains.

Brown pelicans range along the Gulf, Pacific, and Atlantic coasts, mainly from Virginia south to northern Peru, the mouth of the Amazon River, and parts of Trinidad and Tobago. After nesting, North American birds flock farther north, returning to warmer waters for winter.

A former example of the detrimental effects of pollution in marine ecosystems, today the brown pelican symbolizes the success of wildlife conservation programs. 🦅

Emily M. Grey is a writer, photographer, naturalist, and attorney from Virginia's Eastern Shore. Her passions are nature, traveling, and interacting with varied cultures.



A FIELD AND AFLOAT



Outdoor Classics by Beth Herter

Field Guide to Urban Wildlife: Common Animals of Cities and Suburbs—How They Adapt and Thrive

by Julie Feinstein
Stackpole Books
Softcover, color photographs
www.stackpolebooks.com

Wild Guide—Bats

by Peter Aleshire
Stackpole Books
Softcover, color photographs

Last week, in an established suburban neighborhood nestled between a golf course, a manmade lake, and a meandering estuarine branch, I caught a glimpse of a red fox hurrying along nervously, undoubtedly carrying a captured meal to its den. Seeing this fox was a delightful shock, and I wondered: “Where did it come from, and how does it manage to survive alongside the manicured lawns, swimming pools, SUVs, and barbeque grills that typify our sprawling and diminishing landscape?”

We’re all accustomed to breaking for jay-walking Canada geese; we enjoy watching squirrel antics; and we take pleasure in watching the various avian visitors that frequent our feeders and birdbaths. But how much do we really know about the hidden lives of myriad creatures with whom we share our living space?

With almost more synchronicity than I can normally stand, my fox sighting coincided with the arrival of a box from Stackpole Books containing two rather apropos field

guides that held answers to many of my questions. In *Field Guide to Urban Wildlife* we learn that for urban mammals, birds, insects, and invertebrates like earthworms and slugs, survival depends upon a host of adaptive behaviors: opossums have a naturally occurring protein in their blood that inactivates the venom of poisonous snakes; rats and mice increase their odds by early and avid reproductive behaviors; Eastern cottontails have uniquely efficient digestive systems that allow them to survive on low-quality food; peregrine falcons have become adroit city dwellers; and the blue jays’ hoarding strategies make them such excellent seed and nut dispersers that they are known as a ‘keystone species,’ vital to sustaining oak woods. The author has included handy info-bits such as how to *really* remove skunk odor from family pets—giving readers the science behind a simple and surprising remedy.

This quirky and informative guide is unusual in that a vast amount of interesting and scholarly data are delivered in a genial and often ironic tone. The volume covers the behaviors of various bees, barn swallows, and everything in between, and the information is well-suited for young adult readers, though some of the more salacious aspects of wildlife reproduction may require a little ... ahem ... interpretation.

In *Wild Guide—Bats*, author Peter Aleshire explores the complex world of one of our most misunderstood mammals. Widely mythologized, and often unfairly vilified, the bat with its sophisticated echolocation apparatus and complex social network is a crucial part of our planet’s complex web of interdependencies. They hunt nuisance insects, reduce garden pests, pollinate plants, and contribute to the healthy diversity of our environment. Aleshire delves into the genetic origins of bats: how they grow their wings, fly, and navigate; how they employ their specialized sensory capabilities; what they eat; and how they live. He also includes helpful sections covering species accounts and descriptions, as well as state-by-state species lists.

Landowners Wanted

Quail Action Plan

www.dgif.virginia.gov/quail/qmap.asp



Don't Forget! Mandatory Duck Stamps & HIP



All hunters who plan to hunt doves, waterfowl, rails, woodcock, snipe, coots, gallinules, or moorhens in Virginia must be registered with the Virginia Harvest Information Program (HIP). HIP is required each year and a new registration number is needed for the 2011-2012 hunting season. To obtain a new HIP number, register online at www.VAHIP.com or call 1-888-788-9772.

In addition, to hunt waterfowl in Virginia hunters must obtain a Federal Duck Stamp and the Virginia Migratory Waterfowl Conservation Stamp. The annual Migratory Waterfowl Conservation Stamp can be purchased for \$10.00 (resident or non-resident) from VDGL license agents or from the Department’s website. To request collector stamps and prints, contact Mike Hinton by email at ducks@hintons.org.

We are pleased to share here the winning essay in the VOWA 2010 Youth Writing Competition, High School Division.

My Side of the Mountain

by Toshali Randey

I sat in the car, waiting for the ride to end. It was a sunny Sunday in the middle of November, one of those unseasonably warm days when everyone proclaims that this winter would be a mild one. My sister sat next to me, napping loudly. Up in the front of the car, my mom gazed out the window, and my dad whistled under his breath as he drove. We'd been driving for almost two hours, and personally, I was sort of sick of it. Where I come from, which is densely-populated Edison, New Jersey, you don't need to drive anywhere for longer than five minutes. Moving to Virginia over the summer was a completely unexpected twist, like someone had jiggled up my insides and then put them back in the wrong places. A large part of me missed the Garden State. So far, Virginia had been relatively boring. Most of all, it didn't feel like home.

As our silver Toyota ambled along the highway, I noticed a change in the scenery. Towering apartment buildings morphed into small houses painted in endearing pastel colors. Trademarked supermarkets turned into rusty grocery stores, and paved streets into bumpy dirt roads.

I rolled down my window and stuck my hand out the window, letting the thick swirls of air wrap around it. Even though the school year was just getting started, this week had been particularly brutal; essays piled on top of projects and worksheets. I wanted to go home to Jersey where I knew all the kids in my grade and every teacher on a how-are-your-kids-doing basis. My preconceived notion was that living in Virginia was never going to match up to my days in suburban Jersey.

My sister interrupted my depressing train of thought. "Look! We're here! It says, 'Shenandoah Valley: Your Wilderness Oasis!'"

I rolled my eyes in response. "It's a bunch of mountains and trees. I don't understand why everyone gets so worked up about

it." It's not that I didn't like nature; I love bird-watching and gardening just as much as the next teenage girl. My feelings of contempt were probably more along the lines of never having the chance to see nature up close and personal.

Once we got some maps from the welcome center, we proceeded to drive slowly up Skyline Drive. The Blue Ridge Mountains dipped and waned around us. The Shenandoah River intertwined with the mountains, its pale sapphire waters churning and flowing in perfect harmony. Most of the trees had already lost their leaves, leaving stick-straight, hollow trunks, which were beautifully symmetrical in their own way. Bare branches protruded from their sides, holding their frail selves strong against the billowing breezes. Thin, browning leaves crunched underneath the car's tires. The sounds of the nearby towns could no longer be heard. Birds swooped in and landed on trees, quietly chirping in melodious tones. I was stunned into silence.

As a scenic overlook appeared, we decided to get out of the car. The wind was mostly warm, with a slight wintry chill in the air. Standing on the edge of the overlook, I could see the beginnings of the Shenandoah River; I could see small cabins in nearby woods; I could see to the point where the sky's milky horizon seemed to meet the land. The view was awe-inspiring, breathtaking, and thrilling all at the same time. I felt like I could fly away into the never-ending sky and glide past the woes and worries of the world.

Suddenly, all at once, I remembered New Jersey. Crowded, cramped, and bustling with energy; that'd been my only idea of 'home'. But now, as I perched on a sturdy rock in the middle of the mountains, I couldn't imagine why I'd loved such a place. I'd be blessed to have this valley as my home forever, with its soothing views and tranquil forests. I couldn't wait to come back when it was in full bloom or covered in snow.

Though it's true I won't ever forget my childhood days in the peeling-paint public schools of Jersey, it's also true that on my first visit to Shenandoah Valley, I learned a valuable life lesson: home is anywhere your soul feels free. I may not amount to much. After all, I'm no expert fisher or accomplished hiker, but even I felt the connection with my side of the mountain that afternoon. And I'm not about to forget that feeling of belonging anytime soon.

IMAGE OF THE MONTH



Congratulations to Kim Crockett of Sandston for her delightful image of a ruby-throated hummingbird scratching its cheek in her grandmother's backyard. Kodak Z740 Easyshare Zoom digital camera, ISO 140, 1/350th, f/3.5 flash fired.

You are invited to submit one to five of your best photographs to "Image of the Month," Virginia Wildlife Magazine, P.O. Box 11104, 4010 West Broad Street, Richmond, VA 23230-1104. Send original slides, super high-quality prints, or high-res jpeg, tiff, or raw files on a disk and include a self-addressed, stamped envelope or other shipping method for return. Also, please include any pertinent information regarding how and where you captured the image and what camera and settings you used, along with your phone number. We look forward to seeing and sharing your work with our readers.

Smallmouth Journal

by Tee Clarkson

Sitting here just above the James River on the deck of a little boat club, I could literally throw a rock and hit a smallmouth bass darting among the rocks chasing minnows. In the distance I can hear traffic, as cars cross the river and people go about their business. There's a siren denoting something gone bad. But here the breeze is blowing, the air is surprisingly cool for the first day of August, and I am alone.

As we get older it becomes more and more apparent that we have literally forgotten more of our lives than we remember. Things that happened 30 years ago, 20 years ago, 10 years ago, heck even a few weeks ago, are lost, somewhere discarded in the back corner of the garages of our minds. They are not gone for good necessarily. Something small and seemingly insignificant can trigger a memory.

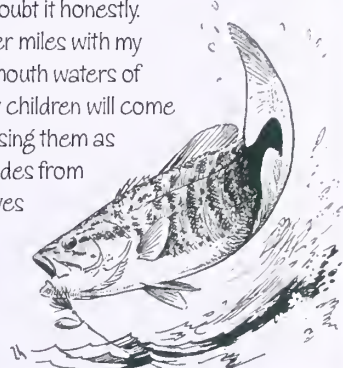
I have a lot of fish stored in the back corner of my garage, a lot of time on the water, and thousands upon thousands of river miles. Recently, I found myself alone in a canoe on the James near Cartersville. It was a hot day and the fishing was less than stellar, but that doesn't generally matter anymore. The older you get, the more you come to accept the good with the bad when it comes to the bite and just relish in the fact that you are out there, that you are not somewhere else doing something far less enjoyable than tossing soft plastics in hopes of fooling a nice bronzeback.

As I drifted quietly onto a shallow, rocky flat covered with bright green river grass I should probably know the name of, but don't, I was suddenly reminded of a day my father and I spent in a canoe not far from here nearly 30 years ago. As for the details of the trip and the numbers of fish caught, I have no recollection. What I do remember is my father throwing a Devil's Horse over a similar rocky flat, with similar grass, and the explosion of a 16-inch smallie as it erupted on the bait. The memory prompted a long cast, which was followed by a similar-sized smallmouth engulfing my small minnow imitation. Unfortunately he ate right as I was

adjusting the canoe with the paddle, and by the time I set the hook, the opportunity was lost. I did catch a glimpse as he slid back into his lie in the grass to wait for another, more inviting opportunity for a meal.

A few days later I took my family on our first river float together. With my son and daughter just four and three years old, I didn't plan for much fishing. In fact, to my wife's utter surprise and slight disappointment, I left the rods at home. We launched our raft in a deep pool on the Rappahannock and floated just a mile to the take-out. We stopped and swam a few times and searched the water beneath us for fish. A few decent smallmouths slid away from their mid-river lies before we reached them and for the most part they left too early in the low water for my children to get a glimpse. As we neared the take-out, I looked downstream and spotted a big fish lying next to a tree at the tailout of a small pool. At first I thought it was surely a catfish, based on the size, but as we got closer I could see the square tail and knew immediately this was no catfish. The giant smallmouth let us float right up to her before sliding lazily across the sandy bottom back toward the head of the pool. I pointed, and my son leaned over the side of the raft and spotted this beast as it slipped quietly back upstream. As to whether he will remember this first smallmouth encounter, I can't be sure. I doubt it honestly.

I hope to log thousands of more river miles with my family in the years to come on the smallmouth waters of Virginia. And I can only hope that that my children will come to love these fish and the days spent chasing them as much as I do. Who knows, perhaps decades from now, one of my children will find themselves alone in a canoe on the James or some other river and be prompted to remember a day we spent on the water and the explosion of a nice smallmouth.



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Tips for Better Fishing Pictures

Everybody shoots the obligatory “grip and grin” photographs of happy fishermen holding their catch, but did you know that if you shoot a head and shoulders shot of your angler and have them hold the fish out toward the camera this will make the fish appear bigger than it actually is? We all want that, don’t we? If you use a small aperture setting (like $f/16.0$), which gives you a maximum depth-of-field, you will have both the fish and the angler in focus! As a safeguard for sharpness, you should focus on the angler’s face and take several shots; then focus on the fish and take several more shots.

“Grip and grins” are fine, but how can you make your images more exciting? Be creative! Get *in* the water and photograph the angler as he releases the catch at the water’s edge. You can do this off the side of a boat as well. Shoot as low to the water as possible without getting your camera wet. Use a right angle finder, if your camera allows for one, to make these shots easier to capture.

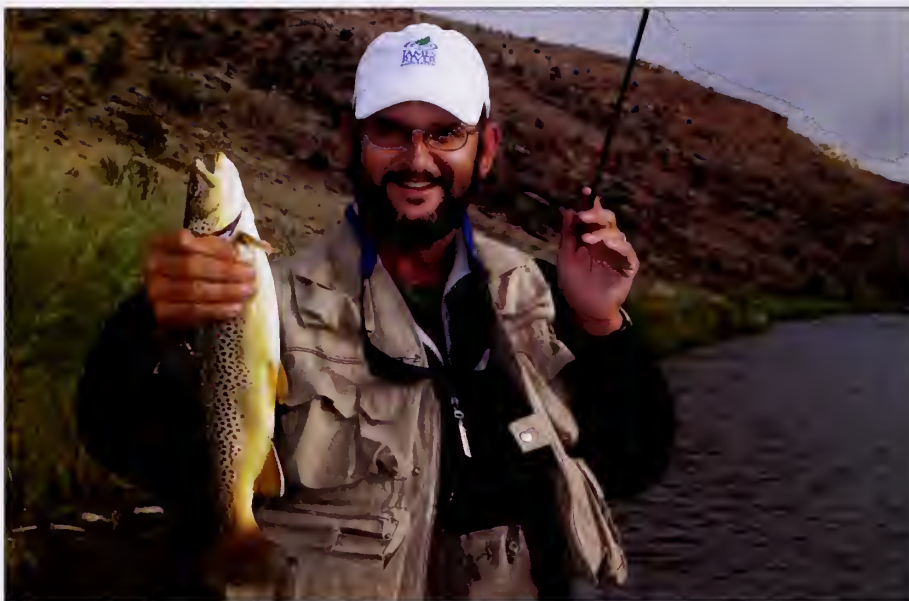
Eyes add great expression to a photograph. That’s why I have my subjects remove their sunglasses. Hats can also obscure a person’s face, especially if the sun is high—causing the brim of the hat to cast a shadow across their eyes. Ask your subject to either remove or tilt their hat back so there is no shadow.

On bright days, using a flash can help get rid of harsh shadows, but you will need to be careful because a flash can overexpose a subject. (That is, make it too bright.) I usually practice *before* anyone catches a fish so I know if I’ve got my flash adjusted properly. This is important because you want to release the fish as soon as possible. Most flashes today offer whole- and $\frac{1}{3}$ -stop adjustments. On some cameras you can even control the pop-up flash. Check your camera and flash manuals to see if this is possible.

Don’t forget to include the scenery! I like to have an angler positioned on the left or the right of the frame with a beautiful background playing out in the rest of the shot. Make sure that your horizon line is always straight and out of the center. Using a $\frac{1}{3}$ to $\frac{2}{3}$



Capt. Mike Ostrander shows off a gorgeous brown trout caught on the Gunnison River in Colorado. Note that he is holding the fish toward the camera so that it looks bigger; the fish is against a dark and neutral background (I like neutral better here); flash was used to get rid of shadows; and there is great scenery behind and to the left of him. But those sunglasses just don’t cut it!



By removing the sunglasses you can see the eyes of the subject, which makes for a much better photograph. Look at that smile! ©Lynda Richardson

ratio of sky to water/land or vice versa lends itself to a more appealing composition. (See *Horizontal Horizons*, *Photo Tips*, January 2011.)

I hope that these tips help you capture better photographs of your next fishing adventure! Good Luck and Happy Shooting!



On the Water

by Tom Guess

Really?

I never knew that when I was a Boy Scout and signed up to take my canoeing merit badge at Camp Chanco near Bracey 29 years ago it would lead me to a lifetime of public safety and boating safety work. Taking that class sparked an interest in the water for me that never subsided. When I was in my mid-teens I became a lifeguard, followed by two years as an Emergency Medical Technician with a volunteer rescue squad. This no doubt fueled my desire to pursue a career in the U.S. Coast Guard which finally landed me here with my DGIF family.

With all of my experiences working accidents and tragedies, I could never firmly grasp how just one or two simple poor decisions could lead to a person being severely injured or losing their life. Now that I am heavily involved in boating safety, boating accidents, and boating education, it puzzles me even more.

As you may have read in my column last month I compared decisions that mitigate risk to those that contribute to risk. I tried to point out how the decisions that boaters make either help them have a safe day on the water or contribute to having a dangerous day on the water.

If you put some common boating scenarios in the same context as driving a vehicle on the road, it's easy to see how glaring those poor decisions are and, also, how difficult it is to understand why people operate vessels the way they do on the water. Here are some questions to show you what I mean:

- ◆ If you were driving a car, would you ever imagine allowing a family member or child to go out onto the hood or the trunk and hang their feet over the side while you motored along at 15 or 20 miles per hour?
- ◆ If you were on a motorcycle, would you leave your driveway at a very high rate of speed, drive toward your neighbor's property line and, just before getting to the edge of their yard, jerk the handlebars, cut a donut, burn down your tires, and then run at a high rate of speed in the opposite direction?
- ◆ Imagine getting in your convertible at 10 a.m. with a couple of friends. Before you leave you put a cooler full of beer in the back seat. You hand everyone a beer and they start drinking; then, you tear out of your driveway and run through your neighborhood yelling and hollering with your cans in the air.
- ◆ Would you tie someone 30 to 50 feet behind your car on a wagon or some other object and pull them at a high rate of speed through traffic, around other vehicles, or through a narrow opening on a wooded lot or under a bridge?

Of course there are other factors at play while driving on land. But *really*, when making choices on the water while combining speed and alcoholic beverages and adding one or more sharp propellers to the mix, you are facing just as much—if not more—danger if you don't make the right choices to keep everyone aboard safe.

Until next time: Be Responsible, Be Safe, and Have Fun!

Tom Guess, U.S. Coast Guard (Ret), serves as the state boating law administrator at the DGIF.



Lee Walker

The same precautions and safe driving techniques you use when driving a car should also be taken when operating a boat. Photo taken during the filming of a NASBLA boating accident reconstruction video shoot.



Dining In

by Ken and Maria Perrotte

Wild Turkey Enchiladas with Salsa Verde

Hunters who simply breast out turkeys, geese, or other larger game birds miss out on superb opportunities to create exceptionally flavorful meals with the meat from a bird's legs and thighs. One of the easiest and tastiest dishes to prepare with this meat is enchiladas topped with cheese and a spicy, green salsa.

Granted, a wild turkey's legs, especially from an older tom, can be a little tough when roasted. The answer is to simply slow-cook those legs and thighs in liquid until the meat nearly falls from the bone.

To prepare the meat:

2 turkey legs and thighs
2 cups chicken stock or broth
1 tablespoon lime juice
1 tablespoon spicy salsa or taco sauce
Water to cover legs

Put all ingredients in a crock pot or stock pot with just enough water to cover the turkey. Cover the pot and simmer for several hours until meat is very tender. Cool and shred meat off the bones. Save the cooking broth.

To prepare enchiladas:

2 tablespoons butter
Shredded turkey meat, prepared above (you should have about 3 or 4 cups)
½ cup cooking broth
½ sweet onion, diced
1 four-ounce can chopped green chilies
24 ounces medium green salsa (salsa verde) – divided
1 teaspoon garlic powder
1 teaspoon cumin
1½ cups shredded Monterey Jack cheese, divided
20 Corn tortillas

Pre-heat the oven to 350°. In a large pan, sauté onion in 2 tablespoons butter until soft. Add the meat, broth, garlic powder, and cumin, and mix well. Stir in the chilies and ¼ cup of green salsa. Cook until warm throughout. Mix in about a half cup of the cheese and remove from heat. Place 2 to 3 tablespoons of mixture on a tortilla and roll up. Place seam side down in a greased baking dish. Continue until the dish is full. Cover with about 12 ounces of the salsa. Much of this will be absorbed into the tortillas during baking. Bake for about 20 minutes, or until the cheese is melted. Add the remaining salsa and cheese as a final topping as soon as the enchiladas are removed from the oven. Serve promptly.

Sides

Side dishes are simple and easily made while the enchiladas are in the oven. Make a little salad with some chopped lettuce and tomato. Add dollops of sour cream with a cilantro garnish and homemade guacamole to round everything out.

Making guacamole is simple. Halve a couple of ripe avocados and then scoop the fruit from the outer skin into a bowl. Add a splash of lime or lemon juice, a little kosher salt, a heaping tablespoon of finely diced sweet onion, and a few dashes of hot sauce. Mash it all together. You can add a tablespoon of finely chopped tomato, as well.

To wash it all down, it's hard to beat a premium lager or Mexican beer that has a wedge of lime squeezed into it. Buen provecho a mis amigos!





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